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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/687,709	10/13/2000	David Leonard Juzswik	TRW(TE)5006	8485
26294	7590	01/13/2004	EXAMINER	
TAROLLI, SUNDHEIM, COVELL & TUMMINO L.L.P. 526 SUPERIOR AVENUE, SUITE 1111 CLEVEVLAND, OH 44114			PREVIL, DANIEL	
			ART UNIT	PAPER NUMBER
			2636	

DATE MAILED: 01/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/687,709

Applicant(s)

JUZSWIK, DAVID LEONARD

Examiner

Daniel Previl

Art Unit

2636

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This action is responsive to communication filed on October 6, 2003.

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 31-42 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 09/752,951. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims are arguably broader than claim 1 of Application No. 09/752,951 which encompasses the same metes, bounds, and limitations. Therefore, it would have been obvious to eliminate the limitations of the narrower claims, since it has been held that omission of an element and its function and a combination where the remaining elements perform the same functions as before involves only routine skill in the art. *Re Karlson*, 136 USPQ 184.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

3. Claims 31-42 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 10 of copending Application No. 09/753,290. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims are arguably broader than claim 10 of Application No. 09/753,290 which encompasses the same metes, bounds, and limitations. Therefore, it would have been obvious to eliminate the limitations of the narrower claims, since it has been held that omission of an element and its function and a combination where the remaining elements perform the same functions as before involves only routine skill in the art. *Re Karlson*, 136 USPQ 184.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 43-56 are rejected under 35 U.S.C. 102(e) as being anticipated by McClelland, Thomas David Stephen (EP 1,026,015)

Regarding claims 43-44, McClelland teaches the step of outputting in response to control from the vehicle based unit (receiving unit 14), a low frequency signal for reception by the tire condition sensor unit (col. 2, lines 48-58; col. 3, lines 1-12; col. 4, lines 28-43) ;outputting, in response to receipt of the low frequency initiation signal, a radio frequency response signal that conveys the tire condition information from the tire condition sensor unit for reception by the vehicle base unit (col. 3, lines 13-20).

Regarding claim 45, McClelland teaches the sensed condition and tire location to a vehicle operator (col. 9, lines 1-17).

Regarding claim 46, McClelland teaches the step of outputting the low frequency signal for reception by the tire condition sensor unit in response to a vehicle condition (col. 9, lines 1-27).

Regarding claims 47, 52, McClelland teaches the step of comparing the conveyed tire identification with a stored identification at the vehicle (col. 9, lines 37-54).

Regarding claims 48,53, McClelland teaches the step of updating the stored identification at the vehicle via provision of a new identification from a tire condition sensor unit (col. 10, lines 1-18).

Regarding claims 49-50, 55, McClelland teaches sequentially outputting, in response to control from the vehicle based unit, low frequency initiation signal

being for reception by a different tire condition sensor unit (each tire monitor includes a switch which is activated by detecting a low frequency signal) (col. 1, lines 51-58; col. 2, lines 1-6) and each tire condition sensor unit outputting, in response to receipt of the respective low frequency initiation signal, a radio frequency response signal that conveys the tire condition information from the tire condition sensor unit for reception by the vehicle based unit (col. 3, lines 13-20).

Regarding claim 51, McClelland teaches the step of indicating the sensed conditions and tire locations to a vehicle operator (col. 9, lines 1-17).

Regarding claim 54, McClelland teaches the step of controlling outputting the low frequency signals for reception by the tire condition sensor units in response to a vehicle condition (col. 9, lines 2-27).

Regarding claim 56, McClelland teaches the step of indicating the sensed conditions and tire locations to a vehicle operator (col. 9, lines 1-17).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doerksen et al. (US 4,816,802) in view of McClelland (EP 1,026,015).

Regarding claim 1, Doerksen discloses a tire condition sensor unit for association with a tire of a vehicle and for communicating a tire condition to a vehicle based unit (col. 7, lines 54-67) tire condition sensor unit comprising: sensor for sensing the tire condition (pressure sensor detects a low pressure condition in the monitored unit) (col. 2, lines 48-49); a radio frequency transmitter means operatively connected to sensor for transmitting a radio frequency signal that indicates the sensed tire condition (radio frequency transmitter which delivers a signal when the pressure sensor detects a low pressure condition in the monitored unit) (col. 2, lines 47-49).

Doerksen discloses every feature of the claimed invention but fails to explicitly disclose a low frequency receiver means, operatively connected to radio frequency transmitter means, for receiving a low frequency initiation signal and for causing radio frequency transmitter means to transmit the radio frequency signal indicative of the sensed tire condition in response to receipt of the low frequency initiation signal.

However, McClelland discloses a low frequency receiver means (low frequency receiver 42) operatively connected to radio frequency transmitter means (frequency transmitter 36) for receiving a low frequency initiation signal and for causing radio frequency transmitter means to transmit the radio frequency signal indicative of the sensed tire condition in response to receipt of the low frequency initiation signal (receiver circuit 42 is configured to respond to

a relatively low frequency signal as the activation signal for the tire monitor 12) (fig. 3; col. 4, lines 9-56).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of McClelland in Doerksen. Doing so would verify accurately the operability of each tire by monitoring efficiently when a tire pressure drop below a predetermined threshold in order to alert the operator to take appropriate measure by replacing or fixing the tire to avoid accident as taught by McClelland (col. 1, lines 3-50).

Regarding claims 2, 12, the above combination discloses all the limitations in claim 1 and McClelland further discloses tire condition sensor unit 12 and vehicle based unit (receiving unit 14) are part of a tire condition communication system and low frequency receiver is a first part of communication means; low frequency transmitter is a second part of communication means connected to vehicle based unit communication means for communicating a request from vehicle based unit to tire condition sensor unit via the low frequency initiation signal to cause the transmission of the radio frequency signal (fig. 1; col. 2, lines 25-56).

Regarding claim 3, the above combination discloses all the limitations in claim 1 and McClelland further discloses low frequency receiver means 42 and low frequency transmitter 36 include first and second magnetic induction antennas (fig. 3-fig. 4).

Regarding claim 4, the above combination discloses all the limitations in claim 1 and McClelland further discloses low frequency receiver means is also for receiving a signal such that radio frequency transmitter transmits a signal that indicates an identification to vehicle-based unit (col. 1, lines 16-50; col. 6, lines 50-58).

Regarding claim 5, the above combination discloses all the limitations in claim 1 and McClelland further discloses a vehicle based unit including means for storing the identification (identification information is stored at the exciter 16 along with the associated position data) (col. 8, lines 15-17).

Regarding claim 6, the above combination discloses all the limitations in claim 1 and McClelland further discloses pairing the stored identification with a tire location (col. 8, lines 1-17).

Regarding claim 8, the above combination discloses all the limitations in claim 1 and McClelland further discloses a controller 24 and pressure sensor 31 and RF transmitter 36 for controlling operation of tire condition sensor means (fig. 1-fig. 3).

Regarding claims 9-10, the above combination discloses all the limitations in claim 1 and McClelland further discloses memory means for holding a fixed identification associated with the tire, RF transmitter is connected to memory means, also indicates the fixed identification associated with the tire (fig. 3; col. 8, lines 1-44).

Regarding claim 11, the above combination discloses all the limitations in claim 1 and McClelland further discloses memory means is capable of learning new identifications col. 8, lines 1-44).

Regarding claim 13, the above combination discloses all the limitations in claim 1 and McClelland further discloses communication means does not convey identification information (col. 8, lines 15-17).

Regarding claim 14, Doerksen discloses sensor means senses tire inflation pressure as the sensed tire condition (col. 6, lines 41-61).

3. Claims 7, 26, 42, are rejected under 35 U.S.C. 103(a) as being unpatentable over Doerksen in view of McClelland and further in view of Mendez et al. (US 5,612,671).

Regarding claims 7, 26, 42, the above combination discloses all the limitations in claim 1 but fails to specify that means for utilizing vehicle speed to vary rate of repeat occurrence of the transmission of the initiation signal.

However, Mendez discloses vehicle speed to vary rate of repeat occurrence of the transmission of the initiation signal (col. 2, lines 62-65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Mendez in Doerksen and McClelland. Doing so would monitor accurately the tire speed of the vehicle and alert immediately the operator in case of an abnormality of the

tire so that operator can take appropriate measures to fix the problem as taught by Mendez (col. 1, lines 6-50).

5. Claims 15-25, 27- 41, are rejected under 35 U.S.C. 103(a) as being unpatentable over Doerksen et al. (US 4,816,802) in view of McClelland (EP 1,026,015).

Regarding claim 15, Doerksen teaches a tire condition communication system for a vehicle (col. 7, lines 54-68; col. 8, lines 1-4) comprising: a sensor associated with a tire for sensing at least one tire condition (pressure sensor detects a low pressure condition in the monitored tire) (col. 2, lines 48-49); a radio frequency transmitter associated with the tire operatively connected to sensor for transmitting a radio frequency signal that indicated the sensed tired condition (radio frequency transmitter which delivers a signal when the pressure sensor detects a low pressure condition in the monitored unit) (col. 47-49)

Doerksen discloses all the limitations above but fails to explicitly disclose a communication means having a first portion associated with the tire and operatively connected to radio frequency transmitter and a second portion associated with the vehicle for communicating a request from the vehicle to radio frequency transmitter to transmit the radio frequency signal indicates the sensed tire condition.

However, McClelland discloses communication means (exciter 16) having a first portion associated with the tire and operatively connected to radio frequency transmitter (the exciter 16 is configured for placement near the tire monitors 12 for collecting tire monitor information associated with the low frequency transmitter 20) (page 2; lines 48-52) and a second portion associated with the vehicle for communicating a request from the vehicle to radio frequency transmitter to transmit the radio frequency signal indicates the sensed tire condition (exciter 16 includes tire information, a remote tire pressure monitoring system, provides a warning to the operator when the tire pressure is outside a predetermined range (page 2, lines 25-42).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of McClelland in Doerksen. Doing so would have provided the system with the capability of monitoring accurately the condition of tires and alert the operation in case an abnormality occurs so that drivers can take appropriate measures to overcome the problem as taught by McClelland (page 2, lines 3-50).

Regarding claim 16, the above combination discloses all the limitations in claim 15 and McClelland further discloses low frequency receiver means 42 for receiving a low frequency initiation signal and for

causing radio frequency transmitter means 36 to transmit the radio frequency signal in response to receipt of the low frequency initiation signal (fig. 3; col. 9, lines 1-37).

Regarding claim 17, the above combination discloses all the limitations in claim 15 and McClelland further discloses first and second magnetic induction antennas (coil 18 and I1) (fig. 3-fig. 4).

Regarding claim 18, the above combination discloses all the limitations in claim 14 and McClelland further discloses a radio frequency receiver 42 associated with the vehicle for receiving the radio frequency signal that indicates the sensed tire condition (col. 4, lines 28-51).

Regarding claim 19, Doerksen discloses sensor means senses tire inflation pressure as the sensed tire condition (col. 6, lines 41-61).

Regarding claim 20, Doerksen discloses indicator means for providing an indication of sensed tire condition (col. 5, lines 44-62).

Regarding claim 21, Doerksen discloses indicator means also indicating tire location (col. 5, lines 44-62).

Regarding claims 22, 23, the above combination discloses all the limitations in claim 15 and McClelland further discloses radio frequency transmitter 36 for transmitting identification to determine tire location (7, lines 52-58; col. 8, lines 1-17).

Regarding claim 24, the above combination discloses all the limitations in claim 16 and McClelland further discloses the step of updating the stored identification (col. 8, lines 15-17).

Regarding claim 25, the above combination discloses all the limitations in claim 16 and McClelland further discloses number of times identification is received (col. 7, lines 52-58).

Regarding claims 27-28, the above combination discloses all the limitations in claim 1 and McClelland further discloses RF transmitter is connected to memory means, also indicates the fixed identification associated with the tire (fig. 3; col. 3, lines 1-44).

Regarding claim 29, the above combination discloses all the limitations in claim 1 and McClelland further discloses memory means is capable of learning new identifications (col. 8, lines 1-44).

Regarding claim 30, the above combination discloses all the limitations in claim 1 and McClelland further discloses communication means does not convey identification information (col. 8, lines 15-17).

Regarding claims 31, 34, Doerksen teaches a tire condition communication system for a vehicle (col. 7, lines 54-68; col. 8, lines 1-4) comprising: a sensor associated with a tire for sensing at least one tire condition (pressure sensor detects a low pressure condition in the monitored tire) (col. 2, lines 48-49); a radio frequency transmitter associated with the tire operatively connected to sensor for transmitting a radio frequency signal that indicated the sensed tire condition (radio frequency transmitter which delivers a signal when the pressure sensor detects a low pressure condition in the monitored unit) (col. 47-49)

Doerksen discloses all the limitations above but fails to explicitly disclose a communication means having a first portion associated with the tire and operatively connected to radio frequency transmitter and a second portion associated with the vehicle for communicating a request from the vehicle to radio frequency transmitter to transmit the radio frequency signal indicates the sensed tire condition; memory means, associated with the tire, for holding a fixed identification associated with the tire.

However, McClelland discloses communication means (exciter 16) having a first portion associated with the tire and operatively connected to radio frequency transmitter (the exciter 16 is configured for placement near the tire monitors 12 for collecting tire monitor information associated with the low frequency transmitter 20) (page 2; lines 48-52) and a second portion associated with the vehicle for communicating a request from the vehicle to radio frequency transmitter to transmit the radio frequency signal indicates the sensed tire condition (exciter 16 includes tire information, a remote tire pressure monitoring system, provides a warning to the operator when the tire pressure is outside a predetermined range (page 2, lines 25-42); memory means, associated with the tire, for holding a fixed identification associated with the tire (col. 8, lines 15-17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of

McClelland in Doerksen. Doing so would have provided the system with the capability of monitoring accurately the condition of tires and alert the operation in case an abnormality occurs so that drivers can take appropriate measures to overcome the problem as taught by McClelland (page 2, lines 3-50).

Regarding claim 32, the above combination discloses all the limitations in claim 31 and McClelland further discloses a low frequency receiver means, operatively connected to radio frequency transmitter means, for receiving a low frequency initiation signal and for causing radio frequency transmitter means to transmit the radio frequency signal indicative of the sensed tire condition in response to receipt of the low frequency initiation signal (col. 4, lines 9-51).

Regarding claim 33, the above combination discloses all the limitations in claim 31 and McClelland further discloses first and second magnetic induction antennas (coil 18 and L1) (fig. 3).

Regarding claim 35, the above combination discloses all the limitations in claim 1 and McClelland further discloses memory means is capable of learning new identifications (col. 8, lines 1-44).

Regarding claim 36, the above combination discloses all the limitations in claim 31 and McClelland further discloses counting the number of receptions of an identification to determine whether to learn a new identification (col. 7, lines 50-58).

Regarding claim 37, the above combination discloses all the limitations in claim 31 and McClelland further discloses communication means does not convey identification information (col. 8, lines 15-17).

Regarding claim 38, Doerksen discloses sensor means senses tire inflation pressure as the sensed tire condition (col. 6, lines 41-61).

Regarding claim 39, Doerksen discloses indicator means for providing an indication of sensed tire condition (col. 5, lines 44-62).

Regarding claim 40, Doerksen discloses indicator means also indicating tire location (col. 5, lines 44-62).

Regarding claim 41, the above combination discloses all the limitations in claim 31 and McClelland further discloses means for controlling communication means responsive to a vehicle condition (fig. 1).

Response to Arguments

6. Applicant's arguments with respect to claims 1-56 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Koch et al. (US 5,573,610) discloses tires containing a monitoring device for monitoring an engineering condition therein.

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Jo et al. (US 5,883,305) discloses a tire pressure monitoring system.


Oldenettel et al. (US 6,435,020) discloses a method for allocating tire pressure control devices to wheel positions in a tire pressure control system of a motor vehicle.

Momose et al. (US 6,362,733) discloses a tire inflation pressure monitor and monitoring method.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Previl whose telephone number is 703 305-1028. The examiner can normally be reached on Monday-Thursday. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Hofsass can be reached on 703 305 4717. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872-9314 for regular communications and 703 872-9315 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-4700.


Daniel Previl
Examiner
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December 31, 2003